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ABSTRACT

Why geography is essential and central to the mission of education at all levels and why the profession or occupation of geographers should become increasingly recognized are discussed. Some common complaints lodged against geography and ways to deal with these complaints are first examined. For example, it is often said that geography has inadequate standards and quality, as revealed in its courses, its training of graduate students, its papers at annual meetings, and in its leading journals. To meet this complaint, more rigorous standards must be imposed and greater self-discipline on the part of geographers in meetings and journals must be exercised. The paper then goes on to discuss the nature of the discipline and what makes it special or unique. The justification for geography as a distinct discipline is made. First, modern geography is demonstrating that there are fundamental principles, and second, at a pedagogical level, geography can make a distinctive and essential contribution in its capacity to describe and analyze how diverse physical and human processes do interact to produce particular regional landscapes, cultures, and places. The two major roles of geography at all levels of education are then discussed: (1) to describe what and how much is where; and (2) to study how physical and human processes are conditioned by and in turn structure territory. The paper concludes with a discussion of the geographer in roles other than education. (RM)

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THE NATURE, UNITY AND VALUE OF GEOGRAPHY

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THE NATURE, UNITY AND VALUE OF GEOGRAPHY

The Problem: Challenges Facing Geography

The title is presumptuous, and the task almost absurd, for, after all, our reputation individually and the maintenance of geography collectively depends more fundamentally on the quality of our work and the students we attract than on attempts to define a united purpose. Quality and numbers are necessary, to be sure, but are they intellectually sufficient? Thus, the purpose of this essay is not to impose a narrow view of a discipline that cannot be so contained, but to try to express a conception or set of themes which embraces our diversity.

Geography's strength and its weakness is its interdisciplinary nature. We may assert that our ability to integrate findings from diverse fields permits us to bring to bear powerful insights on real problems in real areas--for example, the flood hazard in a valley or the best economic development strategy for a region. This is a real strength, but to the scholars and administrators from other disciplines, or the intelligent layman, this capacity may be viewed as eclectic, even parasitic, as evidence of the lack of disciplinary focus. In an era of declining university enrollment and support of higher education and of the search for "weak or non-central" programs to terminate, we cannot afford to rely on the good will of competitors to recognize our good works, or to carry on as an "undisciplined" discipline.

The loss or threatened loss of geography programs or of their separate identity is not unique to our discipline, yet it is an obvious warning to even the strongest programs that all is not well. Geography has some real problems, but it is also making a greater contribution than ever before, and is well deserving of our best efforts at preserving and enhancing this role.

We would not be geographers if we did not believe in the reality and value of the discipline. But it would be foolish not to recognize that not all the outside world shares our perception. The image or understanding of modern geography is clouded, even among academics in closely-related fields. We have done little to dispel this nebulous image.

In Canada and Europe, geography has a strong and popular base in the primary and secondary educational system, but in the United States, formal geography is a fragile edifice at the college-university level, without substantial roots of public awareness and support. And while we or our students have been remarkably successful at finding and excelling in a wide variety of jobs, beyond academia, these are too rarely as geographers. We must, then, make clear to the outside world just what is the nature and value of geography, why geography is essential and central to the mission of education at all levels, and why the profession or occupation of geographers should become increasingly recognized.

Attacks on geography are both on specific problems of particular departments - for example, lower enrollment or faculty productivity - and on the profession as a whole. While a local termination or merger may be decided on grounds of quality, isn't the more important reason the judgment that geography just didn't matter, and we weren't strong enough to do anything about it? Here are some common complaints lodged against geography:

First, that it is not central--that it provides no essential dimension of higher education. While geography may be viewed as interesting, it is not often perceived as essential to either liberal education or to the training of other professions.

Second, that it is parasitic and eclectic; that it has no core but is a loose collection of specialties, which are more logically components of many more established disciplines. This is a serious charge which we had better be prepared to deal with. This charge is based on various kinds of evidence--for example, the seemingly incredible heterogeneity of papers at our annual meetings. The image is hardly dispelled by the curricula at some institutions where there is a geography of almost everything--like economic, social and political; the problem really becomes serious when it comes to jurisdictional disputes over courses and degrees with planning, atmospheric sciences, sociology or engineering. I am very much afraid that too few departments have a core course or sequence of courses which provide a strong theoretical basis for the diversity of topical and regional courses. If we do not, how can we counter the argument that we are doing sociology, or economics or whatever under another name? Can geography really be what geographers feel like doing? The problem is not diversity as such, since other disciplines, like anthropology have many topical and areal specializations, but the recognition that these all stem from common theoretical concerns.

Third, it is charged, geography has inadequate standards and quality, as revealed in its courses, its training of graduate students, its papers at annual meetings, and in its leading journals. All four of these aspects have been used against geography in program reviews. Geography has too often succumbed to faddish courses which may have served a temporary purpose ten years ago, but cannot withstand the scrutiny of the cost effective 1980s. Our graduate training is, generally, quite defensible at many or most institutions but it is perhaps not good enough to withstand the increasingly rough internal review and the heightened demands of employers. Personally, I am very concerned with what I view as a retreat from rigor in the training of many students,

including the abandonment of foreign languages, of cartographic skill requirements, and of statistical methodology. The attack by well-meaning geographers on geography as a science, because it may not always be done well, is a very damaging disservice.

Our annual meetings are viewed as open and sometimes exciting, but also as eclectic, with many papers of inadequate quality. AAG councils and members have had spirited debates for years on the advantages of open meetings to encourage participation and paper screening to raise quality. Our latest compromise, to require a 900 to 1200 word abstract for all papers, including those of specialty groups, may or may not help. Ultimately, the quality depends not on how we organize the meetings, but on members taking a serious responsibility for their own and their profession's well-being.

The quality of our journals is to a degree a matter of subjective interpretation. However, because issues of consistency of quality and balance were raised, the Council has established stronger oversight, through the mechanism of editorial boards. In addition, there is the intent to differentiate the Annals and Professional Geographer, the former emphasizing scholarly research, the latter the needs of the profession: the exchange of ideas, statements of current research, and contributions of geographers in business and government. A difficult issue which may need to be considered is whether the proliferation of specialized journals adversely affects the Association publications.

Fourth, it is charged, geography is non-functional--that it doesn't lead to any clear occupation, except perhaps cartographer. Rather our successful competing as planners, location analysts, or regional economists can be seen as more evidence of parisitism, although we might argue that we are as good

or better, and that these are attempts to regain territory that was lost to us. Still, in the longer run, the generation of a demand for geographers as such, as well as the recognition of geographic training as essential for many other occupations, will be a major goal.

Well, these are difficult problems, but we can view them as challenges to be met; and there are many things we can do right to maintain and improve the position of geography locally and nationally. The local level is probably the more important. The first broad issue of geography's centrality or essential role in the long run depends on successfully dealing with the other problems. But in the shorter run programs can be greatly helped by visibility and participation--that is by the aggressive involvement of faculty and students in university governance and interdisciplinary programs. Of course, public involvement cuts both ways. If we aren't prepared, qualified and responsible, exposure can damage--as by testimony based on emotion instead of analysis. Such participation takes time, but it is well worth the effort through greater awareness of what we are capable of, and through generation of internships and jobs.

Establishment of local geographical societies, and the utilization of local officials and business people in these meetings, and the use of our successful professional alumni in the private and public sectors in our courses and seminars can be valuable.

The second problem of eclecticism and disunity can also be approached locally. Most departments need to review their courses carefully for titles and descriptions which at the same time relate back to key geographic concepts and offer some fairly clear and useful knowledge or training for ourselves and others. I may well be wrong, but it is perhaps courses with titles like economic or social or political geography which lead to the charge of parasitism,

whereas we are on distinctive ground if we emphasize geographic concepts like region, spatial organization, urban or rural, transportation, migration, spatial distribution, landscape and the like. Difficult as it may be, we need also to hammer out, formally if necessary, a complementary division of labor with competing programs. The object here is to create sequences of geography courses that come to be viewed as necessary and integral parts of such interdisciplinary areas as planning, transportation, population, environmental studies, urban studies, or area studies.

Finally we should proudly and explicitly offer a core course or courses summarizing geographic theory and methodological issues--preferably as an advanced survey rather than as a history of geographic thought. That is, concepts like spatial organization and spatial interaction, spatial or territorial behavior, regional development and change, evolution of landscape, regions and regionalization, graphic representation, efficiency and equity in location and in resource distribution and utilization should be emphasized, because it is only these dimensional rather than phenomenological characteristics that can unify physical and human, regional and topical, cultural-humanist and quantitative-locational. Put more simply, a core course or courses should get across the message that location matters, that there are reasons why areas and places are different physically and culturally, that knowledge of how territory is organized and changes is a key problem in science and in society.

With respect to quality, there should be no mystery. It is a matter, at all levels in all activities, of maintaining more rigorous standards, and exercising greater self-discipline in meetings and journals.

With respect to the placement of professional geographers, we are at the stage where we have to risk fights by aggressively competing for relevant planning and analytical positions in the private and public sectors. This may

mean putting relatively more emphasis on masters programs, on internships, and on the real world involvement that is necessary to generate those internships and jobs. Too, the diversity which was noted as a possible strength is also manifest as a weakness in the structure of many of our departmental programs. There is an understandable desire for broad coverage of the discipline, but with small staffs, this means a lack of depth and an inability to ensure the quality specialized training that employers expect and deserve and which will gain respect of other disciplines.

We should not be discouraged by this review of problems. Geography has come a long way in the last 25 years. Despite the precipitous decline in our historic service role to education, despite the severe competition from regional science, urban and regional planning, area studies, environmental studies, the status and funding of geography have vastly improved. If we can maintain the momentum of recent years, we will be able to achieve as well as to deserve the centrality and occupational recognition we desire.

Discussing problems of a discipline is difficult enough. Now I will take a greater risk and tackle the question of the nature of the discipline, since most of the problems trace back to the nebulous image of geography. If we cannot clearly, and with reasonable agreement, express the nature of the discipline, can we deserve recognition?

WHAT IS GEOGRAPHY?

What is special or unique about geography is simply that its object of analysis is the earth's surface, and that its purpose is to understand how that surface is structured or differentiated. This purpose is best expressed through a small set of basic questions.

1) What is the structure or organization of the landscape and of flows that results from physical processes; how do these transform the landscape?

2) What is the territorial structure or organization and the flows that result from social and economic processes? How do these transform the landscape?

3) What is the relation between these physical processes and human settlement, behavior and development?

4) How do the facts of spatial separation and of differential physical endowment condition the operation of social and economic processes and the character of places and regions?

5) How can spatial process and structure best be analyzed and displayed?

But scholars in other disciplines often ask such questions about the phenomena or processes they study, the skeptic will reply. According to the above questions, geography is certainly both a physical and a social science. What keeps the subject under meaningful limits?

The justification for geography as a distinct discipline is two-fold. First, at a theoretical level, modern geography is demonstrating that there are fundamental principles--concerning the relation of human behavior and the environment, and concerning the structure or organization of space or territory that hold across broad classes of physical and human processes. That is, the special contribution of geography is that our theories, models and analytical techniques concerning spatial structure or regions not only enrich and improve the theory and practice of other disciplines, but also that spatial processes, behavior, and differentiation are fundamental phenomena of central scientific importance--and the core of the discipline of geography.

Yes, other disciplines do and have to ask these territorial questions. But it is only geography which realizes that the fact of space is not just an awkward inconvenience in our theories (economics, epidemiology, etc.) but

"Of all the constraints in nature, the most far-reaching are imposed by space. For space itself has a structure that influences the shape of every existing thing.

"The idea that space has structure may sound strange, since we usually think of space as a kind of nothingness. . . as the passive backdrop for the lively play of all material things.

"It turns out that the backdrop is not so passive. The nothingness has an architecture that makes real demands on things. Every form, every pattern, every existing thing pays a price for its existence by conforming to the structural dictates of space."

-- from Patterns in Nature

Peter Stevens. Atlantic-Little, Brown

Boston: 1974, pp. 2-3

a basic organizing principle of existence--that the landscape manifests an incredible structure of both general pattern and unique character that requires interdisciplinary comparison and integration to understand.

Second, at a pedogogical level, geography can make a distinctive and essential contribution in its capacity to describe and analyze how diverse physical and human processes do interact to produce particular regional landscapes, cultures and places. At an elementary level, this is the only geography our critics remember--from the fourth grade--but at a university level, such integration can be an immensely creative and valuable contribution to international understanding and policy formation.

The motto of the geographer might be that "location matters"--that the fact that all phenomena take up and require space that the quality of locations differ inevitably and predictably conditions physical and human processes, that we as humans must continually evaluate both the opportunities and the constraints that the characteristics of the surrounding environment and the separation of its elements present us.

If this is a reductionist statement, and appears to exclude any who feel they are geographers, I need to know so that I can work on my powers of expression.

To convince the skeptic that this argument is more than rhetoric, a few examples may be useful. For convenience, I'll use my own work, but the geography reader can substitute others.

One key concept is that territory (space) becomes <u>efficiently</u> divided into similar areas ("cells") as a resolution of opposing forces: of the benefits of increasing size and the costs of maintaining "control" over a greater distance. Without elaborating, it can be demonstrated that examples are legion across

physical and human phenomena. In some of my work, for example, I tried to trace the evolution of the placement of towns and the structure of their tributary areas in a part of Sweden, as the benefits of size came increasingly to outweigh the costs of serving their hinterlands, as investment in transport reduced the friction of separation. In another study, I analyzed the social barriers that tended to prevent the ideal spacing and efficient utilization of Chicago area hospitals.

That study also illustrated a second principle conditioning territorial organization--the tension between an efficient structure which serves the greatest number at the least cost, and a social concern for equity of access--that none should be too badly off.

Another key concept is that the character of the landscape can change gradually over space and over time as a consequence of two other opposing forces. On the one hand, separation, to the point of isolation, in particular environments, over long periods, must be the basic explanation for the extraordinary diversity in nature and culture. But on the other hand, the equally powerful forces of interaction across space, through both physical and human processes, although hindered by space itself, diffuse and modify that diversity, and spread the more successful at the expense of the less successful phenomena or culture traits. In the same Swedish study, I also explored how investment in transportation and in cities diffused across the area from earlier developed centers, and how both the fact of space and the differential character of subareas conditioned the pattern of change. In another study of an epidemic, I also illustrated the diffusion of a phenomenon, here smallpox, through a population and across a territory in which variable clustering or isolation of families predictably govern the spread of the epidemic.

A fourth key concept is that of the differential need for and ability of activities to compete for access to a central point, and a fifth considers the need or preference for activities and people to be close together or apart. The most obvious manifestation of these spatial principles is the geographic structure of the city, patterns of land use and social space that result from competition and social compatibility principles which underlie my work on racial ghettoes.

Finally, I will invoke the geographic concept of region. Regions may be defined as the territories which result from the playing out of physical and human processes in the landscape. They are the manifest taxonomy of geography, the empirical, interrelated composites of phenomena which geographers, as both scientists and humanists, strive to explain and understand. In recent years, I have extensively studied the political region, including electoral districts. I would simply mention here only one important contribution I hope I and other geographers can make: that electoral districts need not and should not be mere temporary conveniences for the carrying out of elections, but to the extent possible be meaningful communities of interest that enhance voter identification and participation and representative responsiveness.

Governments and businesses are continually required to delimit and utilize regions, but most people's ignorance of the geography--or the organization of the landscape--at any scale, results in serious mismatches of purpose and function. One of the major and continuing contributions of the geographer can be to find the region appropriate to a problem--for the analysis of impacts, for the implementation of laws.

Since I have argued that it is space--in the geometric sense of separation and relative location, in the environmental sense of the differential physical characteristics of areas and also in the humanistic sense of the unique identity of places, that is the core of geography, it follows that the map, and cartography

is an absolutely fundamental and integral part of the discipline, not only in the sense of depicting geographically distributional patterns, networks, flows and structures but also as a key research tool, in communicating geographic and spatial ideas, in generating hypotheses about spatial behavior and processes, in the very recognition of the structures it is the purpose of geography to explain. For example, in Hägerstrand's Innovation Diffusion as a Spatial Process, the map of the pattern of adoption over time and space suggested the process of person-to-person contact which controlled the diffusion of the innovation.

My own bibliography might appear to an outsider as dilletantish, since it involves work in economic, political, medical, historical, and even physical geography. But, in fact, the discerning reviewer would know that underlying it all is the simple question I seek to answer: how does the very fact of spatial separation and the differential character of areas affect the process and can I predict its spatial outcome or pattern?

The idea of geography as concerning the role, character and meaning of space(s) readily justifies the unity of physical and human geography, of regional and systematic, and of scientific and humanistic; and it secures an essential role for cartography. This isn't just rhetoric. Think about the task, an important and not really easy one, of describing and explaining the nature of your home town or area, and how it came to be as it is. I won't spell it out, but obviously an adequate job would involve both sides of each of these dichotomies. Places are at the same time unique and examples of general principles and parts of a larger structure, they are produced both by concrete environmental influences and by their spatial relations to the rest of the world.

The Role of Geography in Education at All Levels

From the above discussion, it should be clear that I believe that geography is an essential part of the curriculum, at all levels.

One major role of geography is the familiar one--to describe what and how much is where. Learning--and teaching--about places, areas and countries and about the relation of environment and resources to human development is surely an indispensable part of a liberal education, of the toolkit needed to understand our own and other people's way of life. The colossal ignorance of pupils and the population generally about the world around them is frequently revealed in polls and of studies. The seriousness of such neglect becomes clearer in the mismanagement of both foreign and domestic policy that results from ignorance of the most basic geographic facts.

The fundamental importance of such knowledge is universally understood in Europe; perhaps it is America's historical isolation that permitted us to remain ignorant of the outside world, a neglect that is no longer defensible. This knowledge of the characteristics of areas and countries is appropriately studied at three levels--at the elementary level to expose the child to the diversity and richness of environment and culture, at the secondary level to introduce the student to an understanding of why the landscape has come to look as it does--how and why areas vary in density, prosperity, kind of economy and culture, and what this means, for example, for international relations. At the university level, this regional geography ideally becomes a convincing analysis of the evolution and character of national and cultural landscapes, an indispensable component of programs in international or area studies or international business.

The other major role of geography is to study how physical and human processes are conditioned by and in turn structure territory. These ideas are readily introduced to students at the elementary level, for example, with regard to how their town or neighborhood is organized, or with respect to the area's adjustment to environmental opportunities (kind of farming in the area) or constraints (flood hazard, etc.).

At the university level, this aspect of geography has become dominant, as we specialize in analyzing spatial behavior and structure with regard to particular processes like industrial location, trade and transportation, health services, or urban structure. It is this topical diversity that has opened geography up to attack as lacking a core, as raiding the territory of other fields, because we have not made clear the commonality of our concern with how these topics exemplify principles of spatial behavior and organization.

In addition to our traditional introductory survey course, which so often emphasizes the cultural diversity of the landscape, it may be useful to consider a rigorous senior course which emphasizes spatial thinking (how we perceive and operate in the environment), behavior and structure, of individuals, organizations and countries--which, when done well, demonstrates the centrality of geography to an advanced education. Individuals, private firms, and public entities are continually confronted with critical spatial decisions--where to invest, whether in expansion or branches, where to put facilities, where, how and why to zone or extend infrastructure, where various kinds of impacts of location decisions will occur and how to deal with such regional problems as health or transit across a tangle of jurisdictions. These are all geographic problems, and geography can and should help train all those private and public sector persons who will make these kinds of decisions.

The Occupation or Profession of Geographer

Although it may be evident that the pervasiveness of spatial decisions in life should make geography an essential educational endeavor at all levels, what of the geographer in other roles? It's only too clear that for now the appellation "geographer" lacks specificity and meaning to most employers. The name "geographer" is used in the intelligence community and in foreign affairs

to mean persons trained in some country or region of the world, but that is a restrictive role. The specialty of cartographer is the clearest occupation of geographers, but again serves only a minority of our graduates.

In fact, geography graduates are successfully competing for and working in a number of public and private sector positions that do involve locational analysis or location decisions or evaluations--notably in planning at all levels and of all types, environmental impact analysis, marketing, trade, transportation and travel and the like. Whether we use the term geographer, regional analyst, or location analyst, our need is to demonstrate and publicize the importance to public agencies and private firms of employing one or more, just as they employ economists or psychologists to cover other needs.

Clearly, geographers are competing for this kind of work with planners, regional or urban economists and marketing, operations research, and related business graduates. These fields (and, also regional science) have grown in part because of geography's failure to fill the needs to provide adequately trained professional specialists.

The preceding remarks basically concern geography in the colleges and universities. But strengthening these programs is not enough. Yet more difficult but as important is to revitalize geography in the schools and to make geography known to the general public and to the decision-makers of society. These concerns are going to be, I hope, the focus of AAG and NCGE leadership over the next few years. I still believe that the first task requires more than the casual cooperation between the AAG and NCGE, but at least federation and the bringing to bear of vastly greater time and resources than we've expended before. And I suspect that the latter, national public awareness, also requires levels and kinds of collaboration, as with the National Geographic Society that we have not seen in the past, and investment in publicity and publishing that we have not been willing to make.

Rewards and recognition will only come from work and investment. The real world is more competitive than collegial. In fact, the respect for geography has vastly improved since I first entered geography almost 30 years ago. We have created the intellectual basis for a stronger reentry into the schools and for a greater societal role, but we must also constantly guard the quality of our programs and publications.